

PLATFORM / SCALE

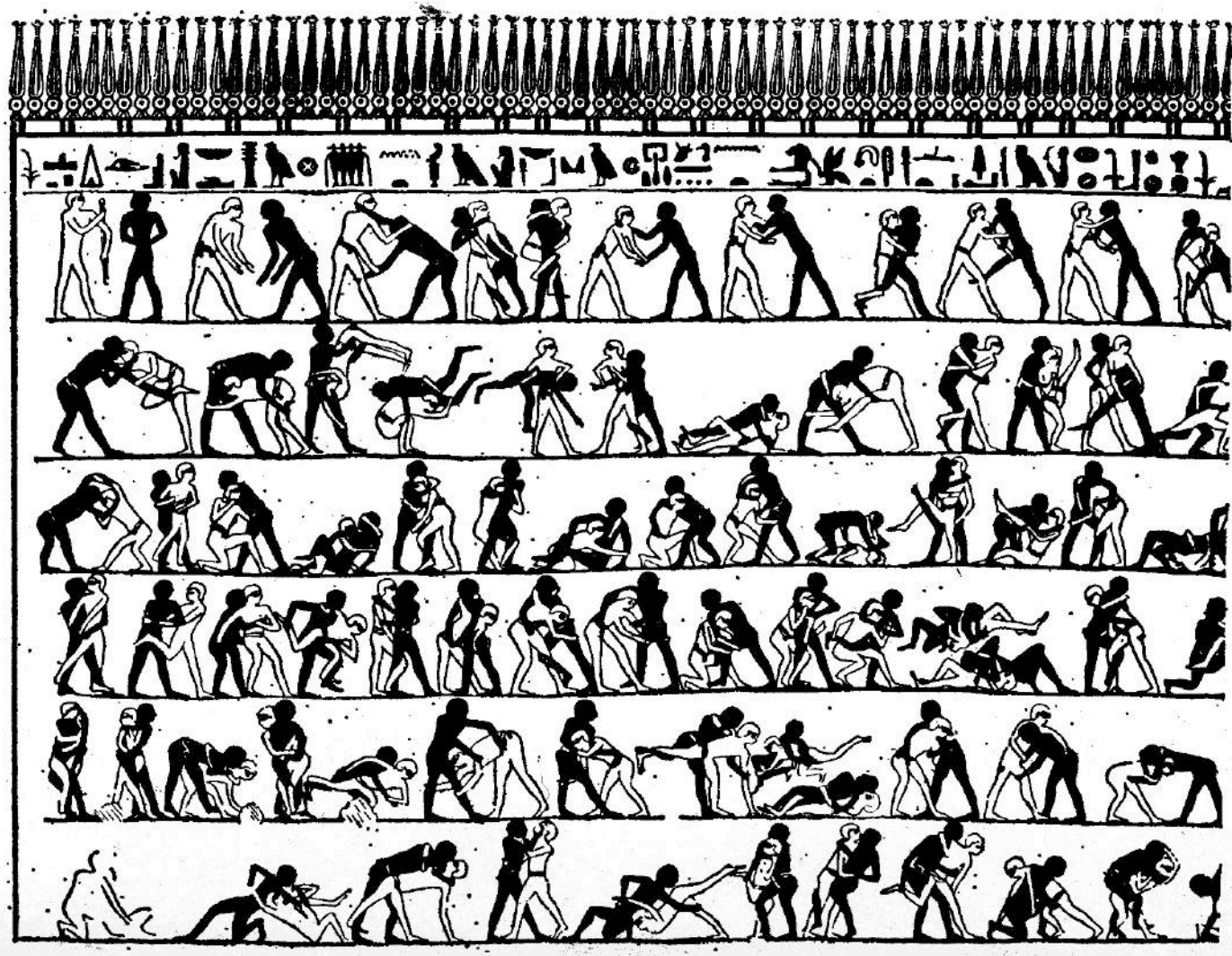
For today I'll be talking mostly about developments in what we call cinema.

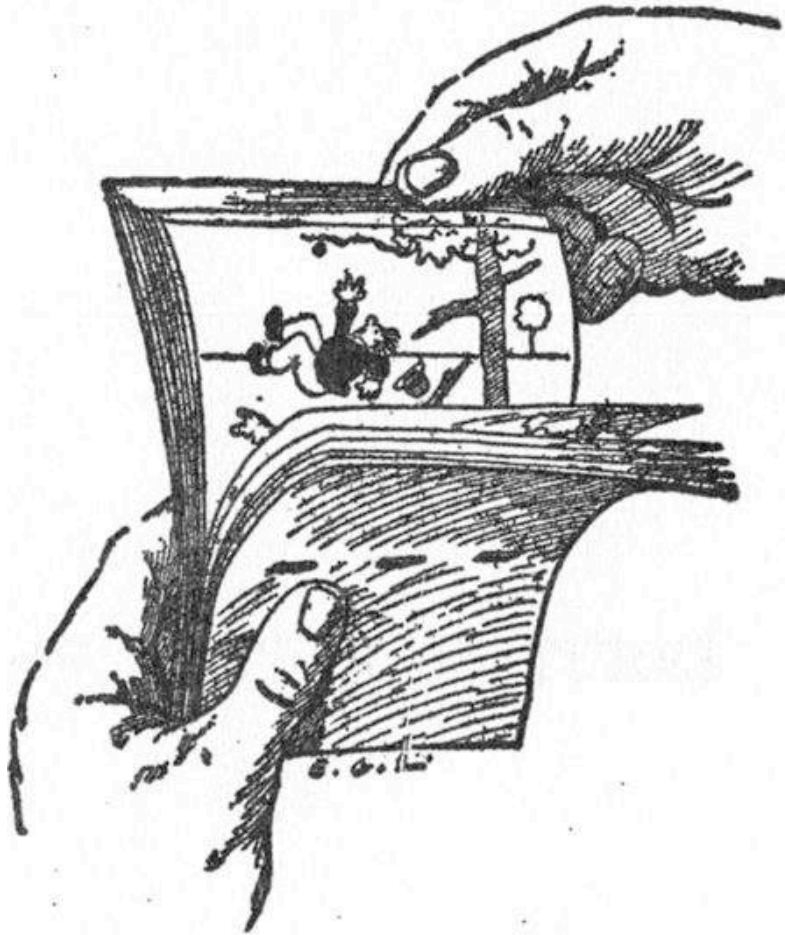
To make sense of the state of cinema and provide context, we will look at the history of cinema from the acquisition side and the distribution side.



PAINTING > ON A WALL







THE KINEOGRAPH.

Flipbooks

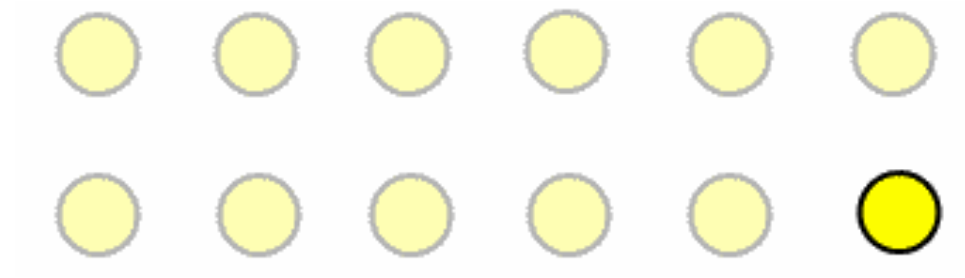
Content was usually handdrawn and watching it was a small scale experience.

<http://www.flipbook.info/history.php>

<http://www.flipbook.info/viewers.php>

Generally speaking: when we refer to the moving image we usually mean a sequence of still images.

BETA MOVEMENT



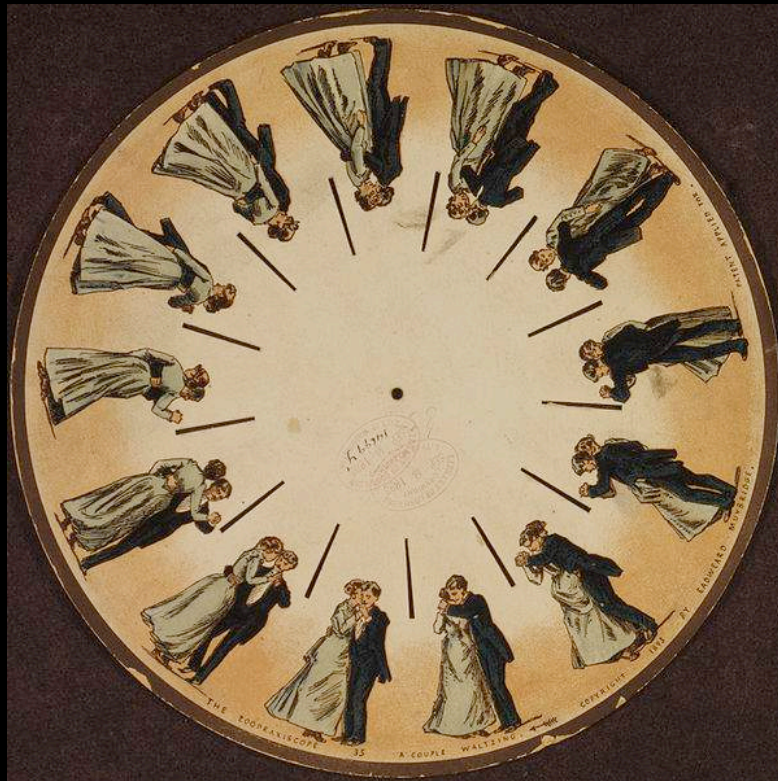


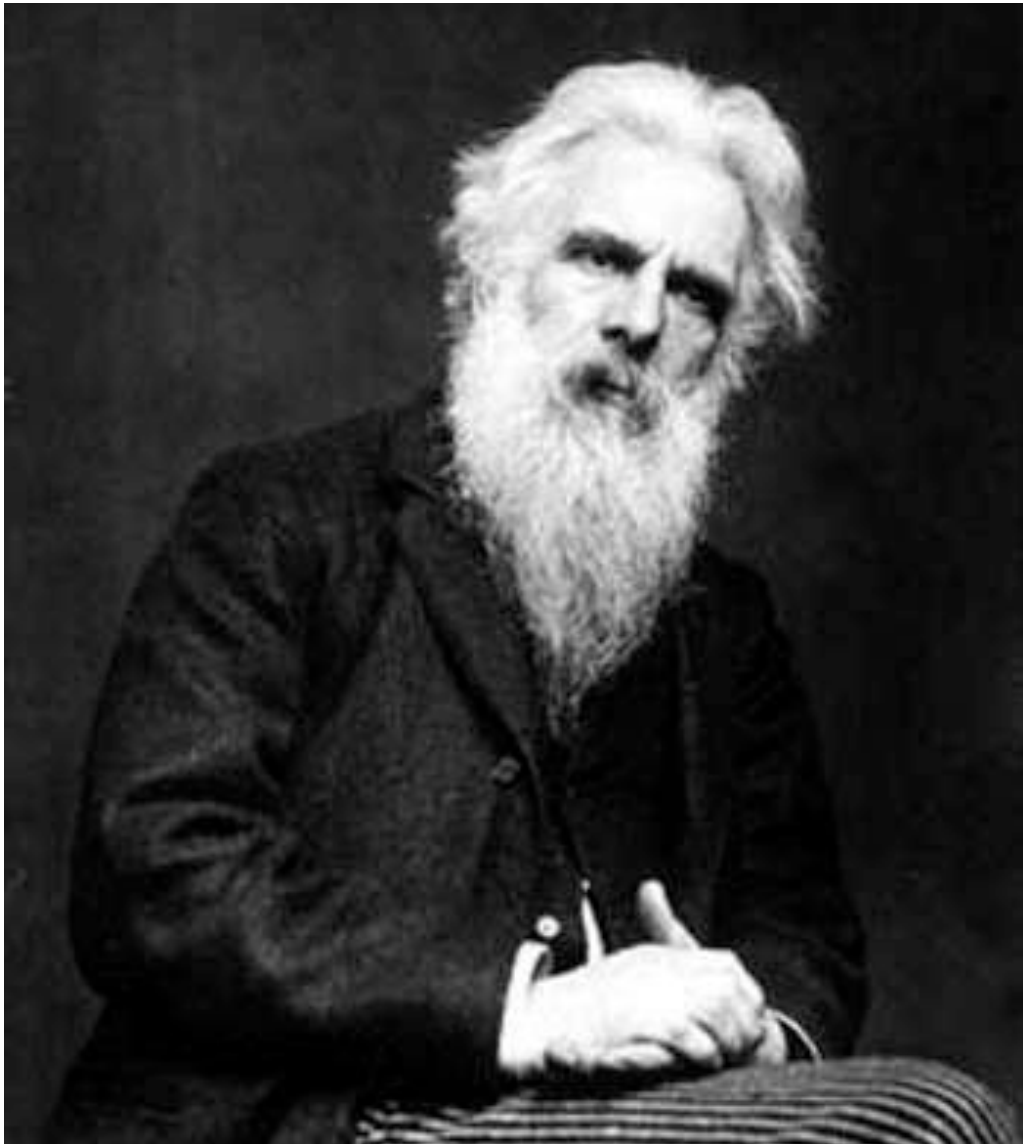
ZOETROPE

The first documentation of a zoetrope that we know is from 2nd century China.

In Europe they became more popular in the 19th century.

Content was usually hand-drawn.

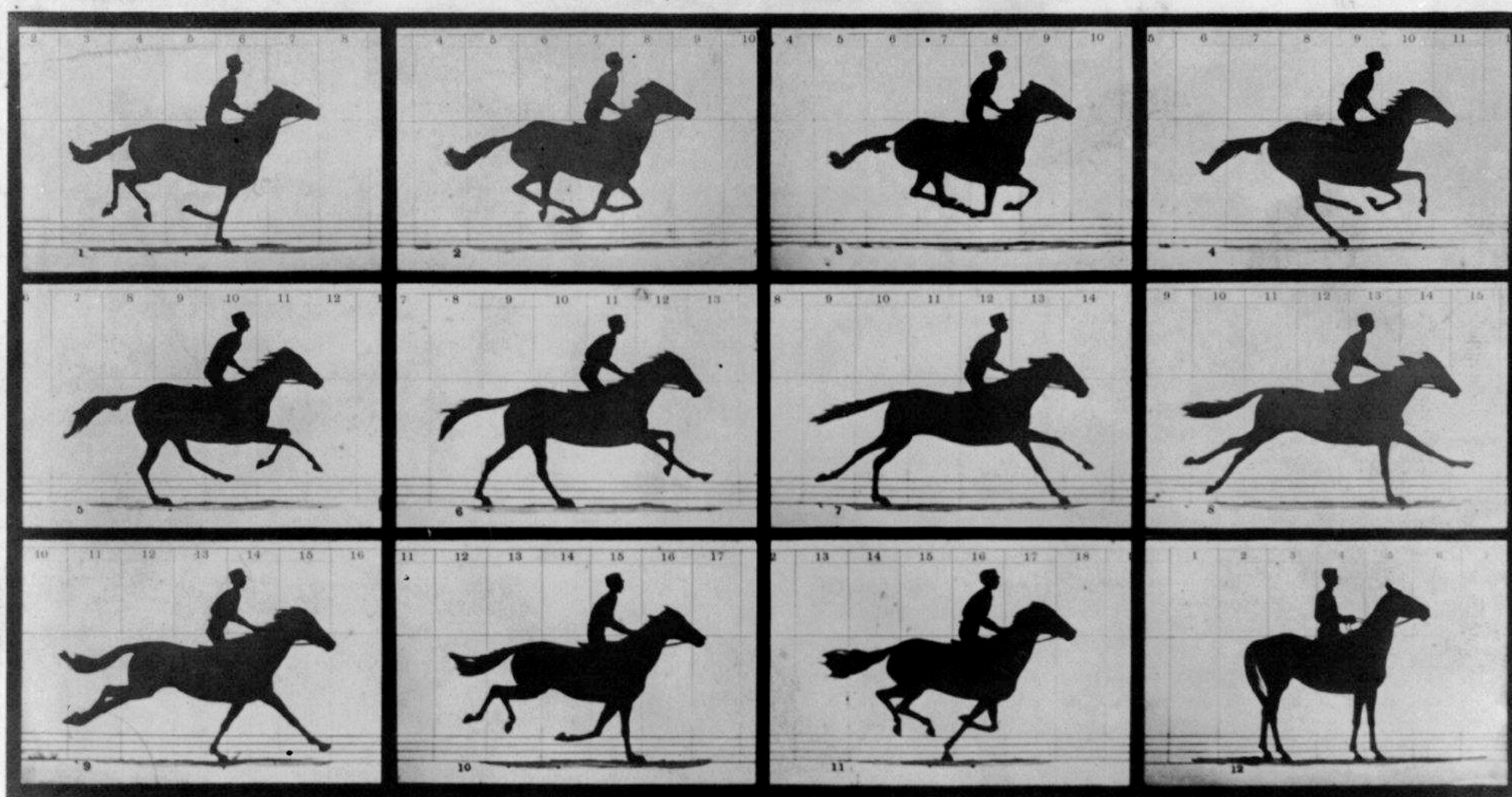




THE GALLOPING QUESTION

In 1872, former Governor of California Leland Stanford, a businessman and race-horse owner, had taken a position on a popularly-debated question of the day: whether all four of a horse's hooves left the ground at the same time during a gallop. Stanford sided with this assertion, called "unsupported transit", and took it upon himself to prove it scientifically. Stanford sought out Muybridge and hired him to settle the question.

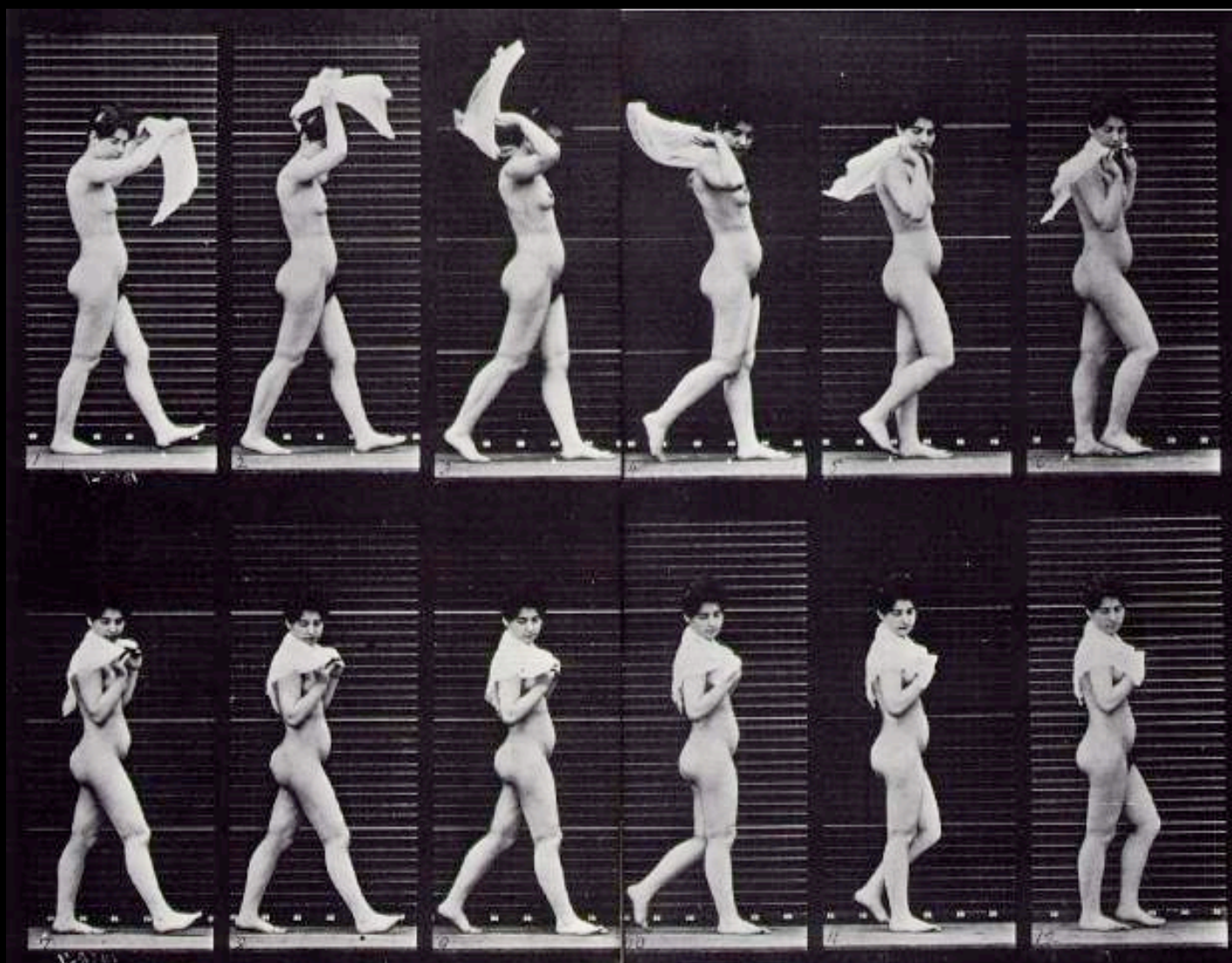
In 1877 he did.



Copyright, 1878, by MUYBRIDGE.

MORSE'S Gallery, 417 Montgomery St., San Francisco.

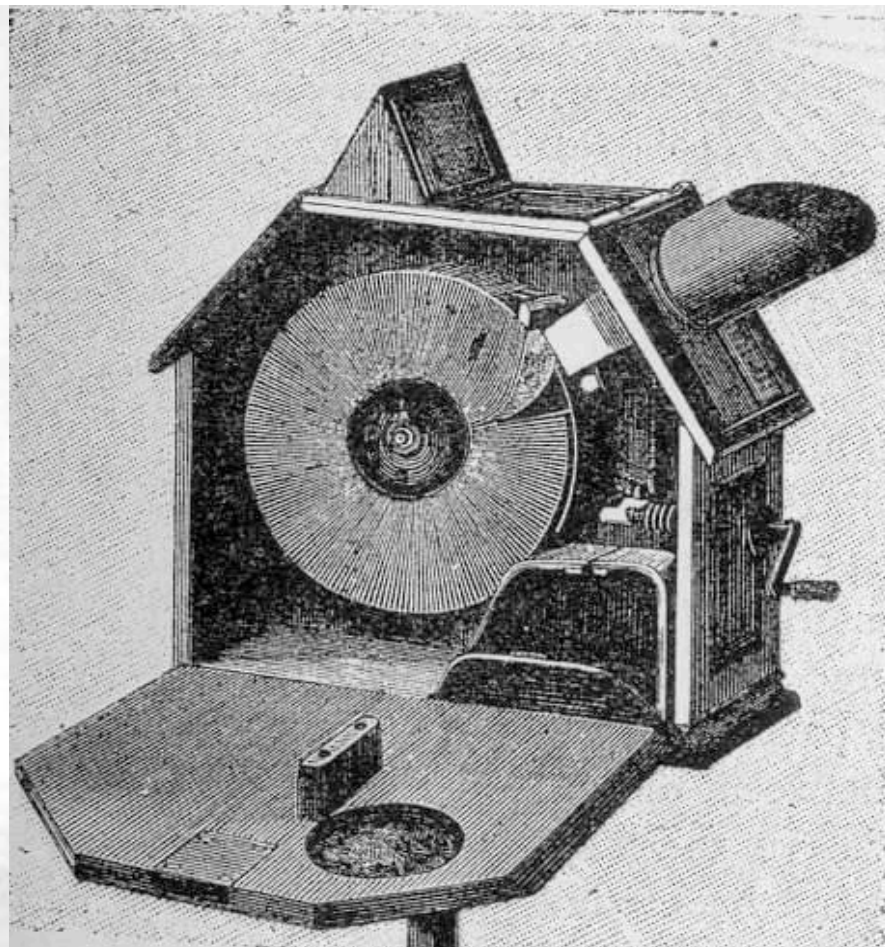
THE HORSE IN MOTION.



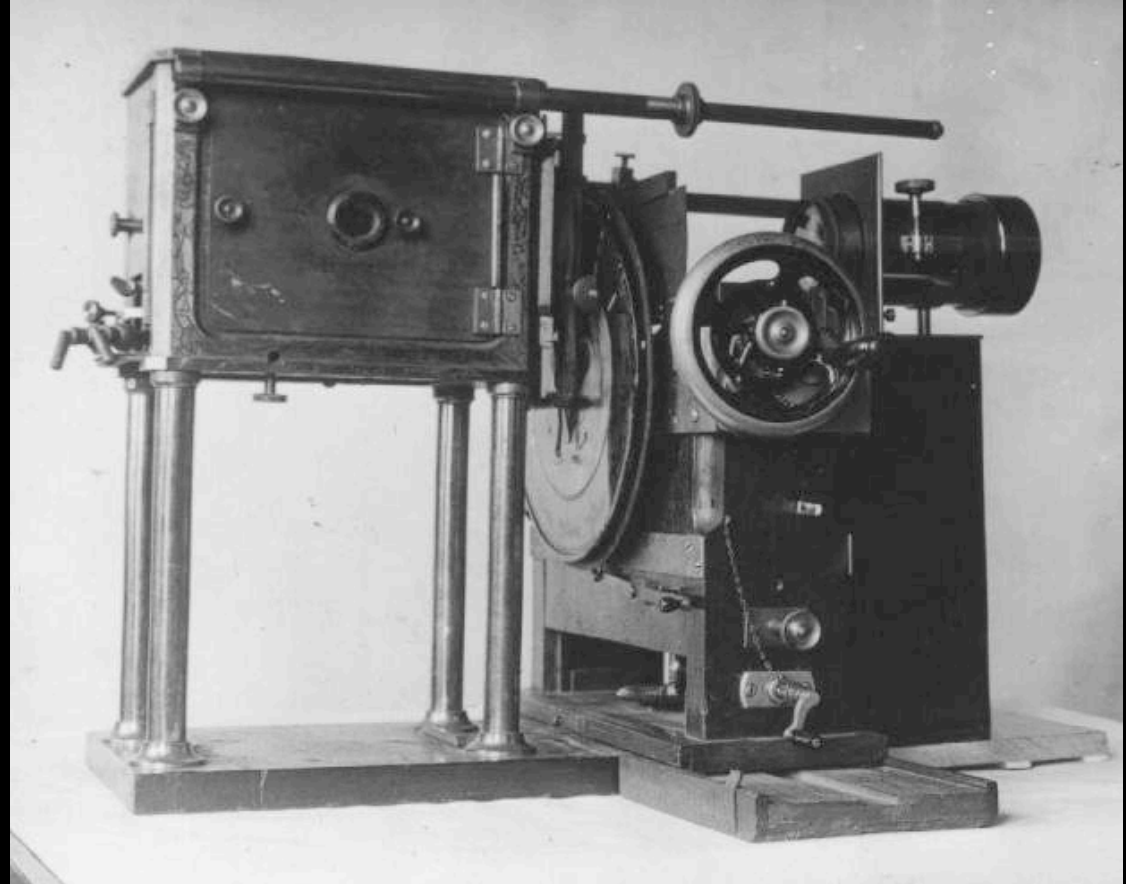
The Mutoscope
For Pennies A Moving Picture Machine



Size, 4 feet, 8 inches high. Shipping weight, 325 pounds
Very popular in all public places









MOTION PICTURE CAMERA

Up until 'now' the content had been drawn, painted or created by linking dozens of photocameras together.

In 1888 the first 'motion picture' was shot on photographic paper by Louis le Prince.





MOTION PICTURE CAMERA

Between 1890 and 1895 there were many inventors working on motion picture (film) cameras all over the world: Le Prince, Lumiere, Edison among them.

They were all hand-cranked, typically averaging around 15 fps.

REAL TIME

The big conceptual shift that came with real motion picture cameras was that movement could be registered in real-time ("and continuously"), and reproduced at the same speed.

Previously motion had always been constructed from stills or drawings.

PROJECTION

When paper was replaced by celluloid film projection for larger audiences became possible.

In 1889 George Eastman releases the first commercially available celluloid base photographic film.



MAGIC LANTERN

The magic lantern or *Laterna Magica* is an early type of image projector developed in the 17th century.

There has been some debate about who the original inventor of the magic lantern is, but the most widely accepted theory is that Christiaan Huygens developed the original device in the late 1650s.

MAGIC LANTERNS AND STEREOPTICONS

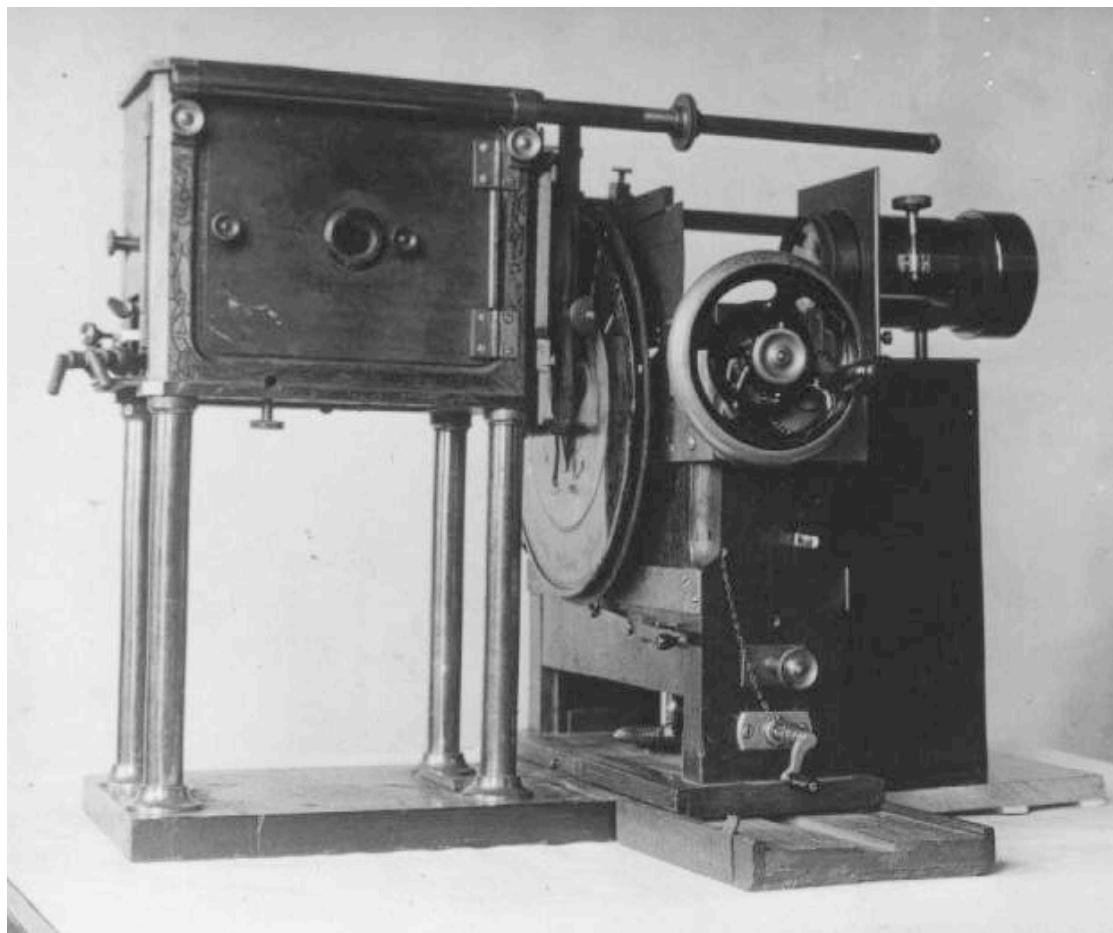
L.M. PRINCE ¹⁴⁸ W. 4TH CINCINNATI

SEND 10¢
FOR
CATALOGUE



VIEWS ILLUSTRATING
EVERY SUBJECT FOR
PUBLIC EXHIBITIONS &
A PROFITABLE BUSINESS
FOR A MAN WITH A
SMALL CAPITAL ALSO
FOR HOME AMUSEMENTS.







EDISON'S GREATEST
MARVEL

THE VITASCOPE

"Wonderful is The Vitascope. Pictures life size
and full of color. Makes a thrilling show."
NEWYORK HERALD, April 24, '96.

COPYRIGHTED 1896 REEF & GEMMON

In Maxim Gorky's famous account of his first visit to Lumière's cinématographe in 1896, he wrote: "Last night I was in the Kingdom of Shadows. If you only knew how strange it is to be there."

Later in the text, it appears that Gorky is quite explicitly critical of the invention, complaining about the films being silent, black and white, and hence not convincing as a realist depiction of life.

ABOUT CLOSE-UPS

"This practice of stationing the camera almost within reaching distance of the performers is like putting everything under the magnifying glass. All the crass details obtrude with hard angularity. We see the make-up of the actors, the lip paint and darkened eyebrows and the falsity of their wigs.

Owing to the absence of retouching wrinkles are augmented and the flesh takes on a pockmarked appearance that is vastly unbecoming. Every detail of the tout ensemble suffers in like manner. Wherever there is anything false or flimsy we spot it at once, because things are viewed at such close range. It is like watching a dramatic performance from a stage box. Under such circumstances there is no chance for illusion. Nowhere does the well-known adage, "Distance lends enchantment to the view," apply with such force as to dramatic performances. Distance is an absolute requisite to any kind of idealistic illusion."

"On Filming a Classic," The Nickelodeon, Vol. 5, no. 1, 7 January 1911, p. 4

ABOUT CLOSE-UPS

In his beautiful photographs [Griffith's/Bitzer's] characters appear as through fine opera glasses. Every change of expression is more clearly pictured than if they were truly before us, and one isn't embarrassed drinking the effect in. Is it not truly soul music? Can such impressions be created in any other way than on the screen?

"Comments on the Films," Moving Picture World, Vol. 14, no. 11, 14 December, 1912, pp. 1081-1082.



TRAVELING CINEMA

In the first decade of the 20th century most cinemas were traveling with fairs and carnival companies.

Content ranged from exotic places, disaster reports and erotica to science fiction.

In the 10's and 20's dedicated cinema's were built across the US and Europe.

MELIES "GENERAL" FILMS

**STILL ANOTHER COMEDIAN
ADDED TO OUR LIST**

FEATURING IN

A HOBO PHILOSOPHER

A REAL GOOD LAUGH

STRONG FULL OF ACTION
EXCELLENT PHOTOGRAPHY

ON THE SAME REEL

A FABLE AND ITS MORAL

GOOD FOR ONE AND ALL

HIGH CLASS, FOUR COLOR ONE SHEETS

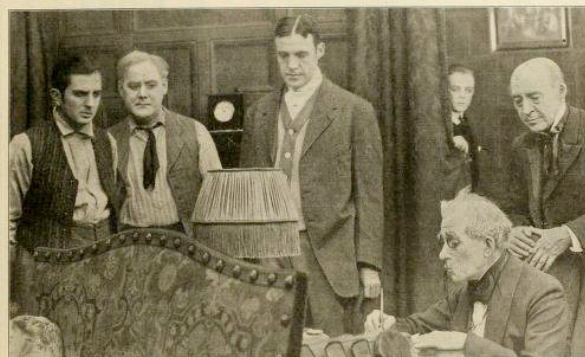
THESE COMEDIES ARE WHAT
YOU WANT, TO GIVE
TONE TO YOUR
PROGRAM

1000 FEET RELEASED FEB. 19th

MELIES FILMS
204 E. 38TH STREET
NEW YORK

WANDERER HARRY
AMOROUS ALGIE
WINKEY WILLY
BATTY BILL

EDISON



*****THE WITNESS TO THE WILL**
IN TWO PARTS RELEASED FRIDAY, JANUARY 9th

Major Thorndyke dies leaving his estate to Marjorie, his grand-niece, cutting off his son Belden. Belden steals the will and the property all goes to him. Marjorie leaves the house rather than be dependent upon him. She cannot earn her own living, however, and is soon in dire poverty. One day she meets Terence, the Major's groom, whom Belden had discharged. Hearing her story, Terence remembers having witnessed a will shortly before the Major's death and is suspicious. He confronts Belden, who lures him out to the country and hurls him over a cliff. But Terence is not killed and Belden pays the price of his crimes.

COMING SINGLE REELS

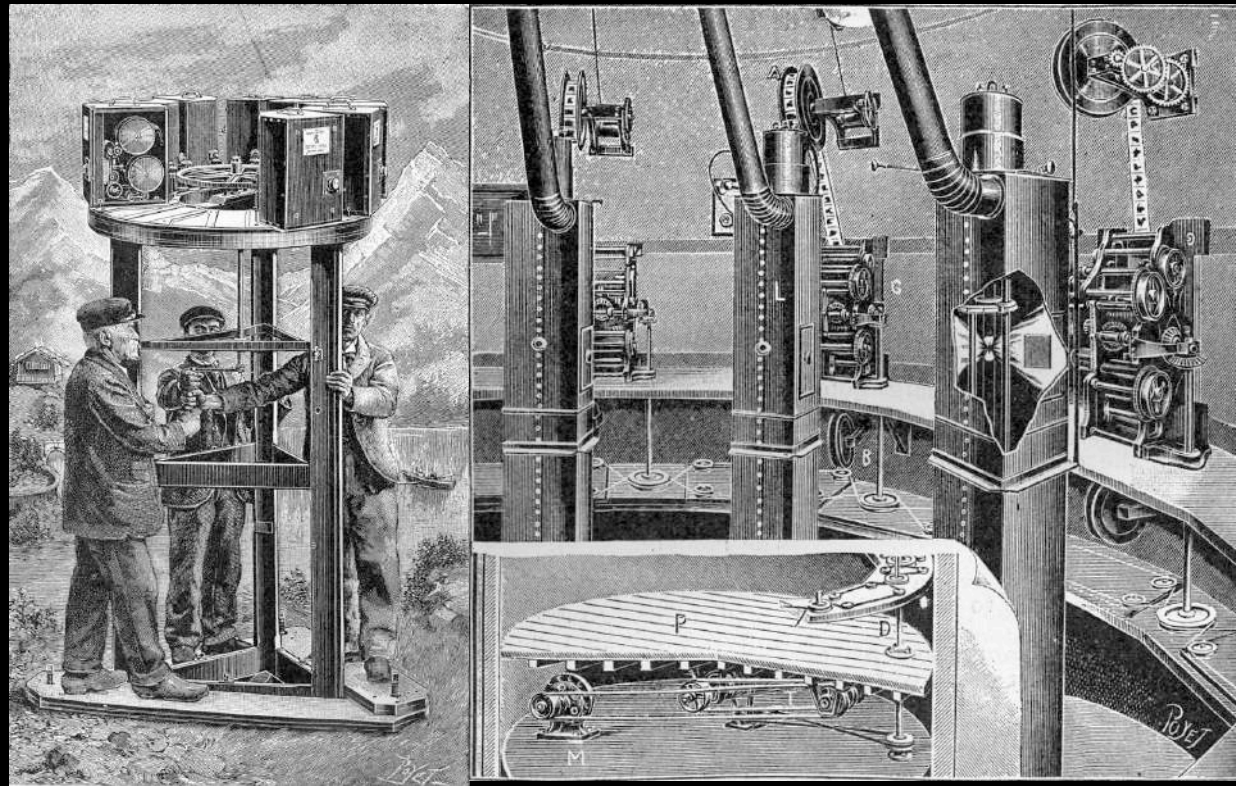
- | | | |
|---|---|---|
| *The Mystery of the Dover Express
Second mystery of the "Chronicles of Cleek."
<i>Released Tuesday, December 30th.</i> | *Stanton's Last Fling
A thrilling tale of adventure.
<i>Released Saturday, January 3rd.</i> | **On the Great Steel Beam
A sensational rescue in mid air.
<i>Released Tuesday, January 6th.</i> |
| *Andy Gets a Job
First of the "Andy" series, featuring Andy Clark.
<i>Released Wednesday, December 31st.</i> | *The Girl in the Middy
A society girl goes back to childhood.
<i>Released Monday, January 5th.</i> | *The Sherlock Holmes Girl
(On the same reel)
African Sea Birds
<i>Released Wednesday, January 7th.</i> |

*One sheet. **One and three sheets. ***One, three and six sheets by the Morgan Lithograph Co.

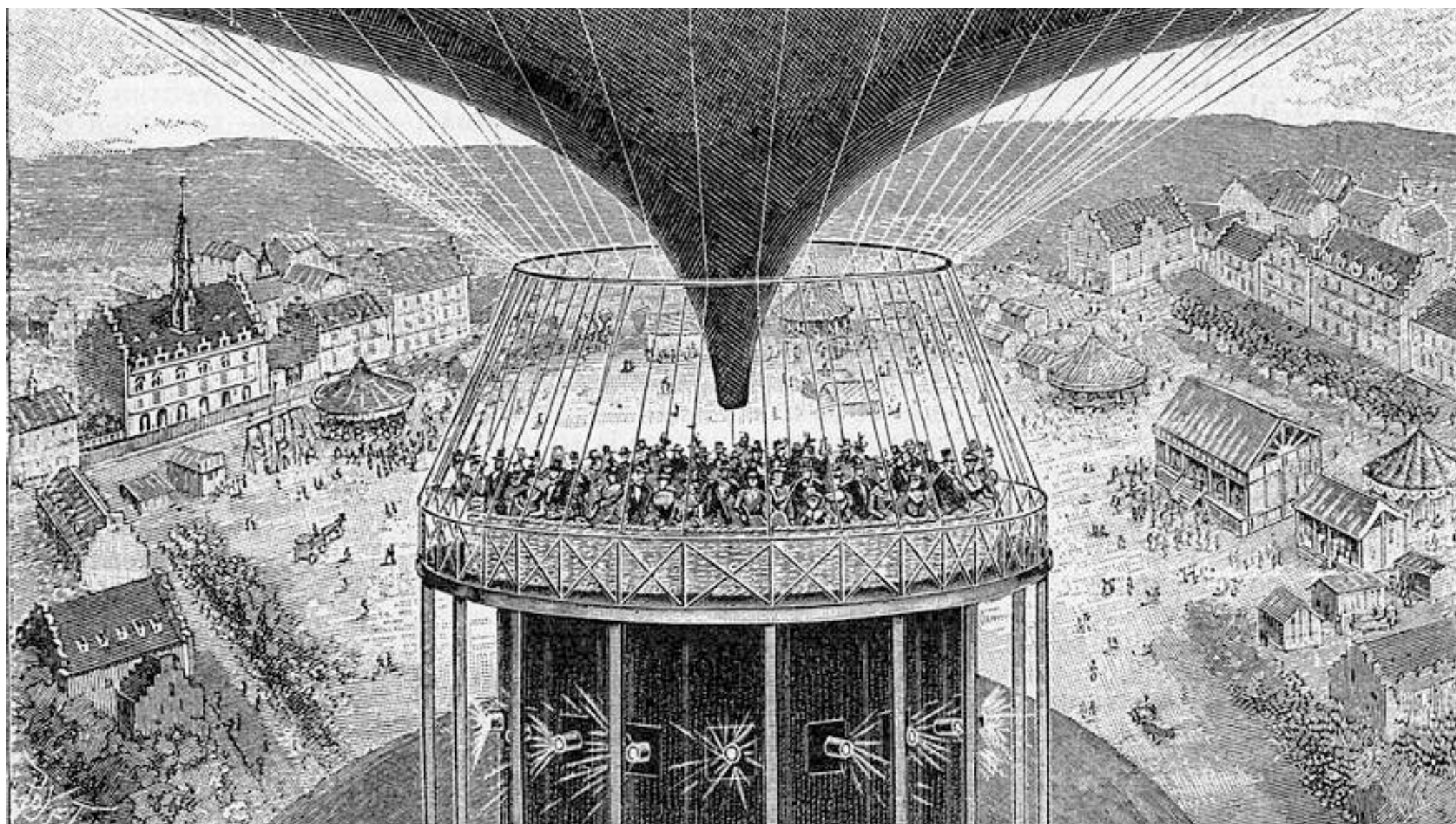
TRADE MARK
Thomas A. Edison

Thomas A. Edison, Inc.
239 Lakeside Ave., Orange, N. J.
Makers of the Edison Kinetoscope, Type "D."





**Illustration of the camera mechanism for the
Cineorama balloon simulation, 1900 Paris Exposition.
It was closed after 3 days for safety reasons...**



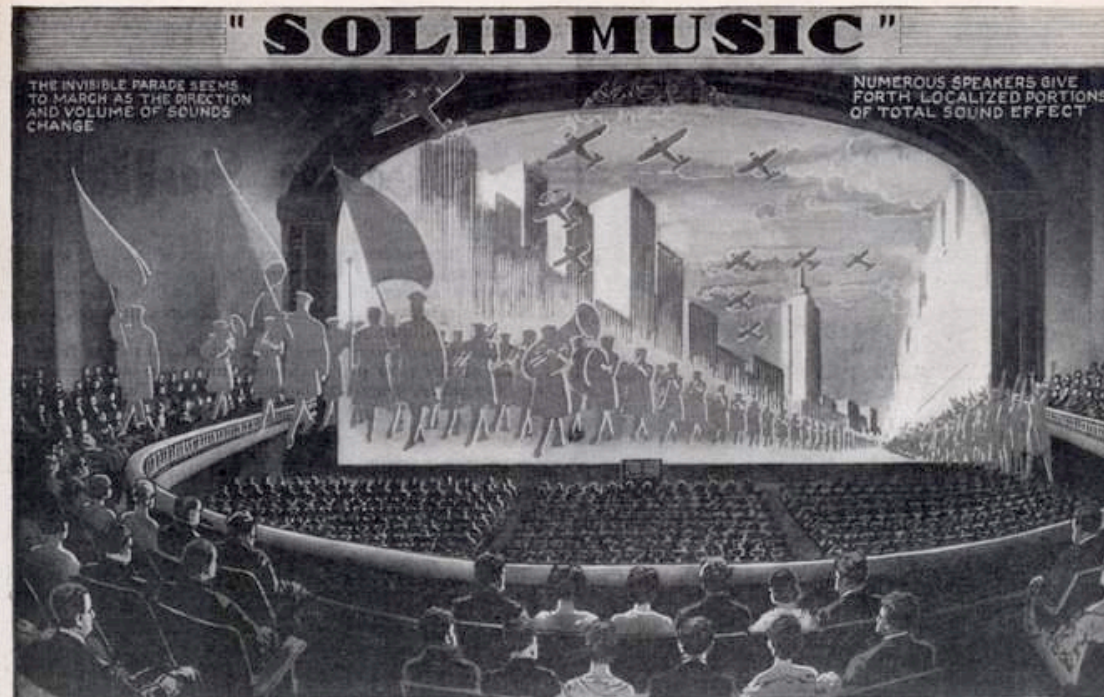
SOUND

Apart from some experiments cinema was mostly 'silent' until the end of the 1920's. Famously 'The Jazz Singer' is considered the first mainstream film with sync sound.

Likewise there have been many experiments with multichannel audio but the real shift from mono to stereo wasn't until audiences heard 'Star Wars' in Dolby Stereo in 1977.

In the 1990's surround mixing (5 or more channels) became the norm for cinema.

Recently with Dolby Atmos and Barco Auro there is a push towards huge arrays of speakers in the cinema.



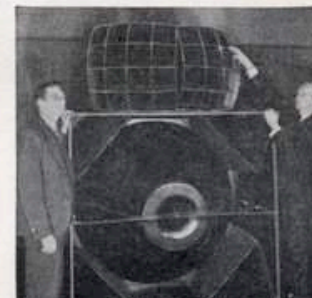
With discriminating projection of sounds from speakers properly spaced, the sources of sound seem to move invisibly about the auditorium.

"Three-Dimensional" Sounds Created

● LIKE pictures on a screen, the best of public-address amplification and loud-speaker reproduction hitherto available has lacked reality. It is not that the instruments are defective in their reproduction of pitch and volume; but the ear is a fairly selective instrument, and hard to deceive when aided by the eyes. The sounds are right, but the directions from which they come are wrong. However, a recent demonstration, staged by telephone engineers, has the astonishing effect of overpowering the testimony of

tion high, but each of the multiple speakers used is giving out a different interpretation of the sounds picked up. The result is that the ear, receiving varied sounds from different directions, finds in them a "stereophonic" or "solid-sound" characteristic; just as the eye judges the distances of shapes moving before it.

For years, the idea of *binaural* or "two-eared" reproduction has been toyed with. Two microphones, located some distance apart, were connected through amplifiers to two loud speakers, one on each side



COLOUR

The first colour films were hand-coloured frame by frame. This was also done for piracy-prevention. Colour films couldn't be copied with colour intact.

Between 1890 and 1930 many different techniques for colour film were proposed and developed, but only a few were succesful.

From 1935 Kodachrome was the first commercially successful mono-pack multilayer colour film .

It wasn't until 1950 that an economical single-layer colour film was developed: Eastmancolor.

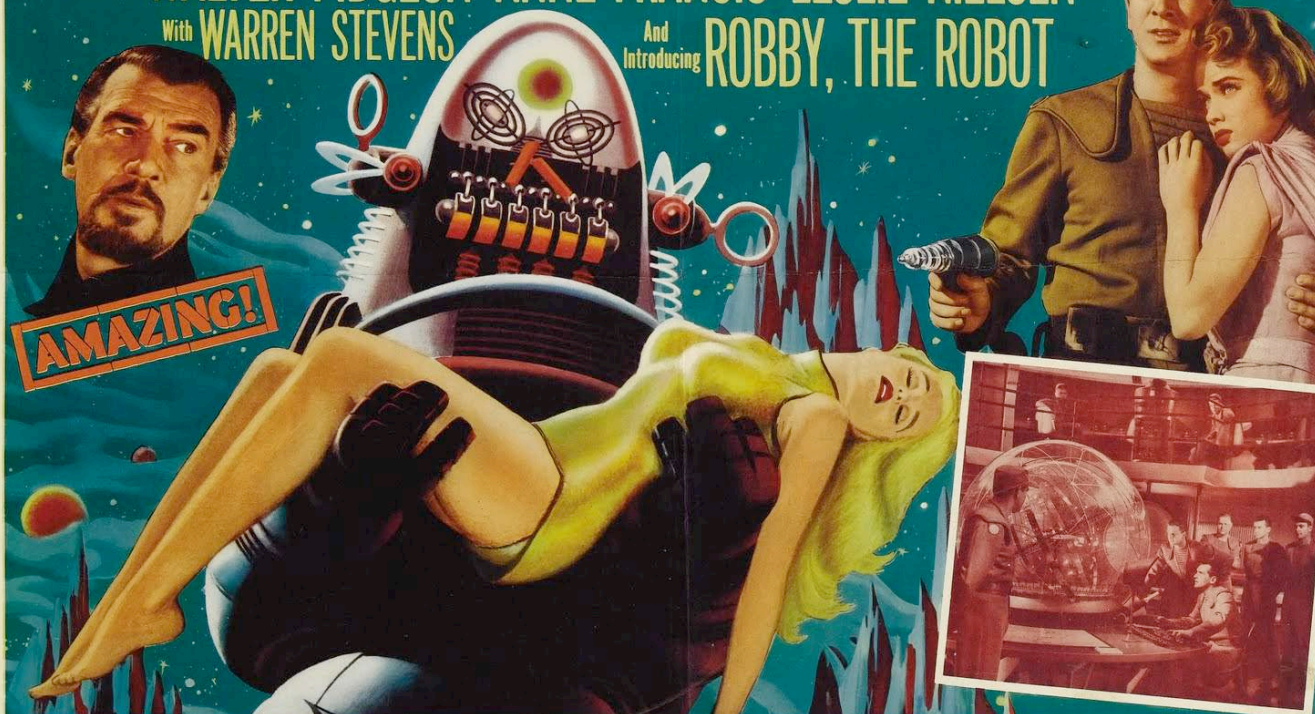
M·G·M
PRESENTS

FORBIDDEN PLANET

IN CINEMASCOPE
AND COLOR

STARRING WALTER PIDGEON · ANNE FRANCIS · LESLIE NIELSEN
With WARREN STEVENS

And Introducing ROBBY, THE ROBOT



Screen
Play by CYRIL HUME

Based on a Story by
IRVING BLOCK and
ALLEN ADLER

Photographed in
EASTMAN COLOR

Directed by FRED McLEOD WILCOX

Produced by NICHOLAS NAYFACK

AN M·G·M
PICTURE

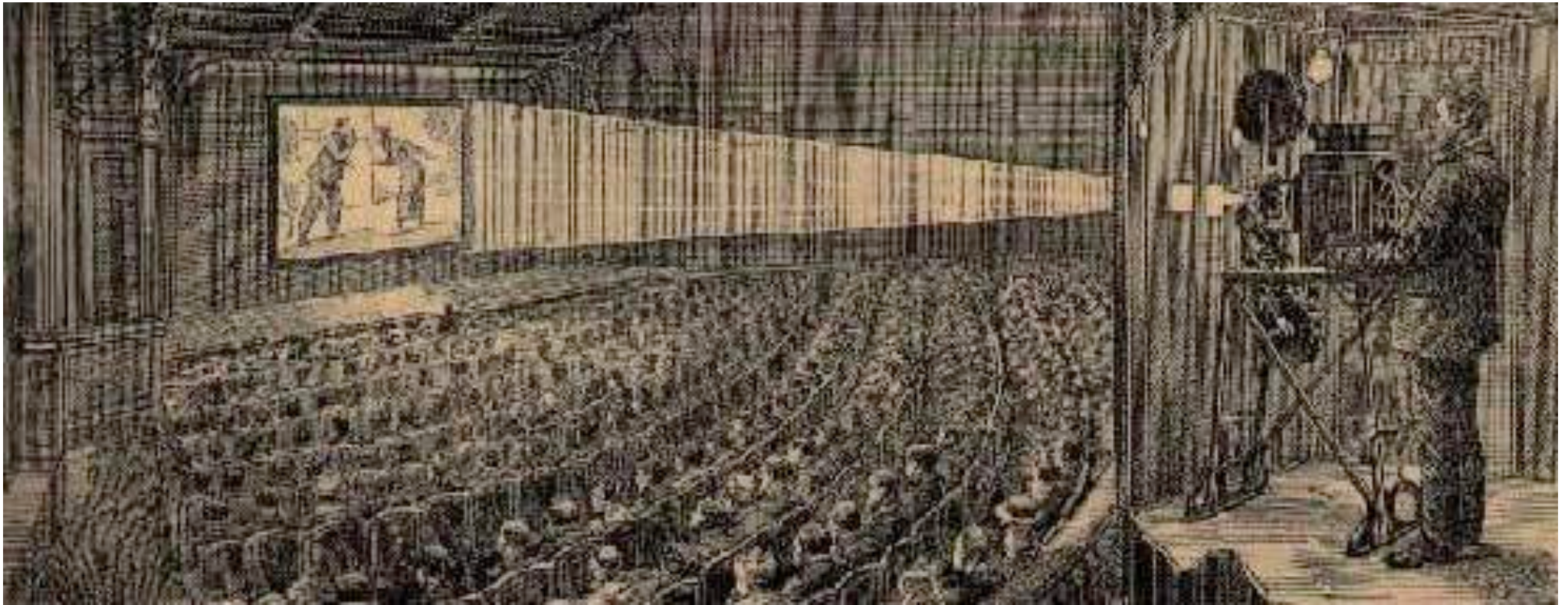
Copyright 1956 Loew's Incorporated



Courtesy of Origin U. S. A.

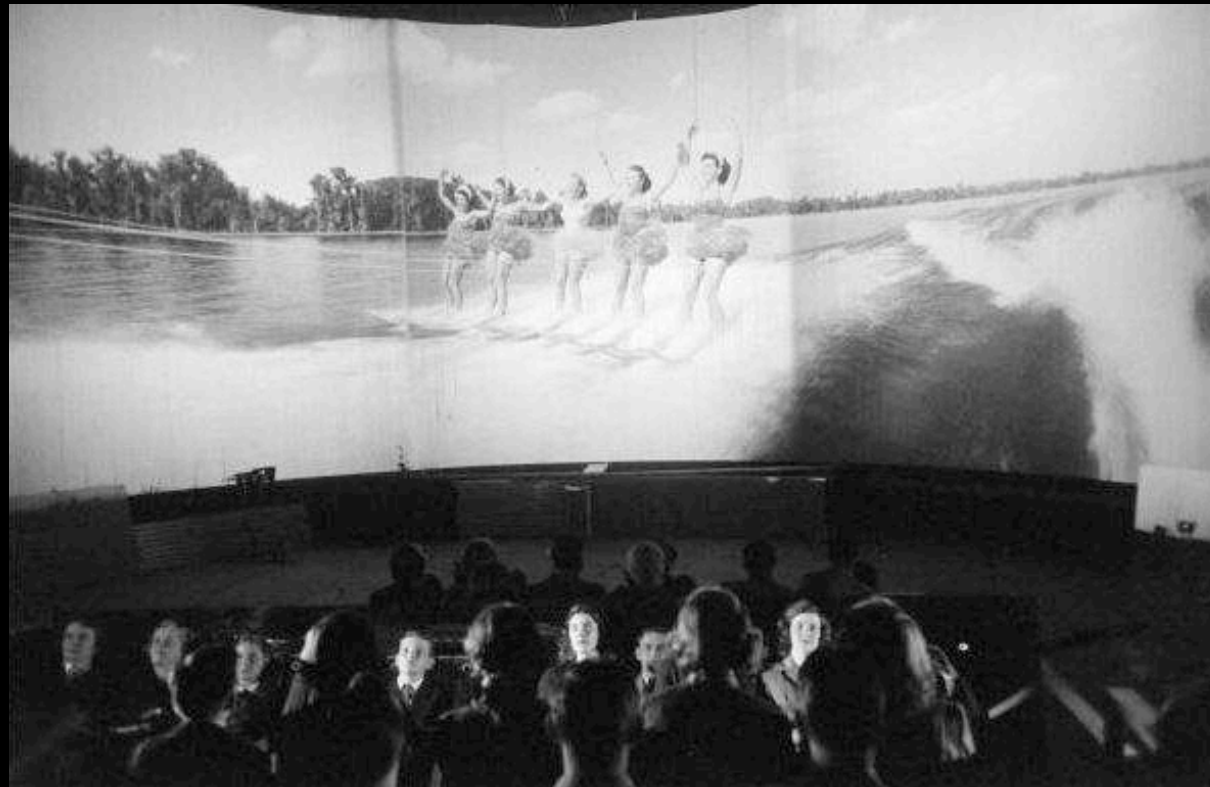
Property of National Screen Service Corp. Licensed for display only in connection with the exhibition of this picture in your theatre. Must be returned immediately thereafter.

56/4

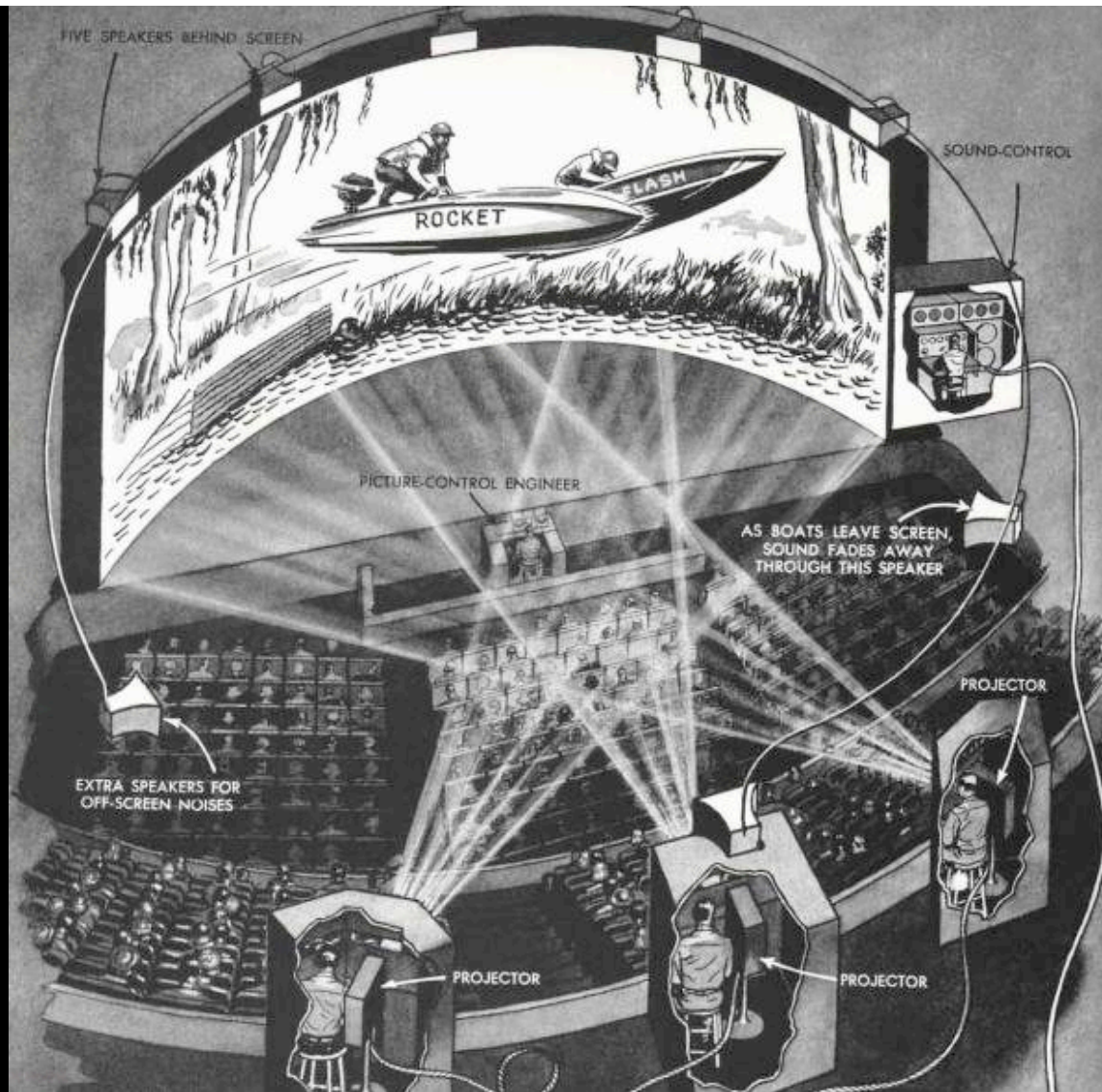


In a movie palace that might hold 5,000 people, an early screen might have been only 15 feet wide. But the images became larger around the time that sound arrived in the 1930s.

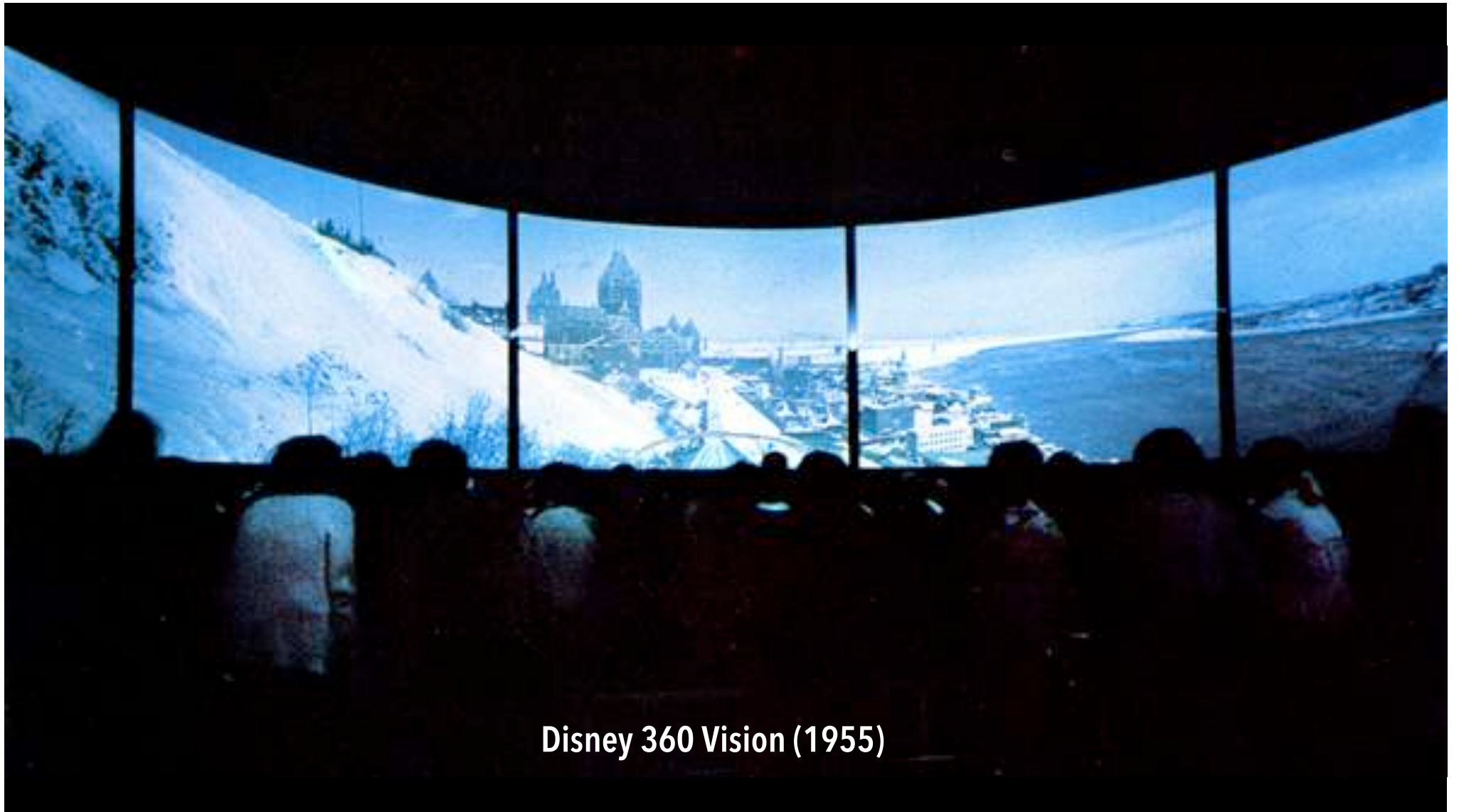
Then, in the 1950s, as Hollywood found itself competing against television, it used special lenses to create movies for screens of expanded width.



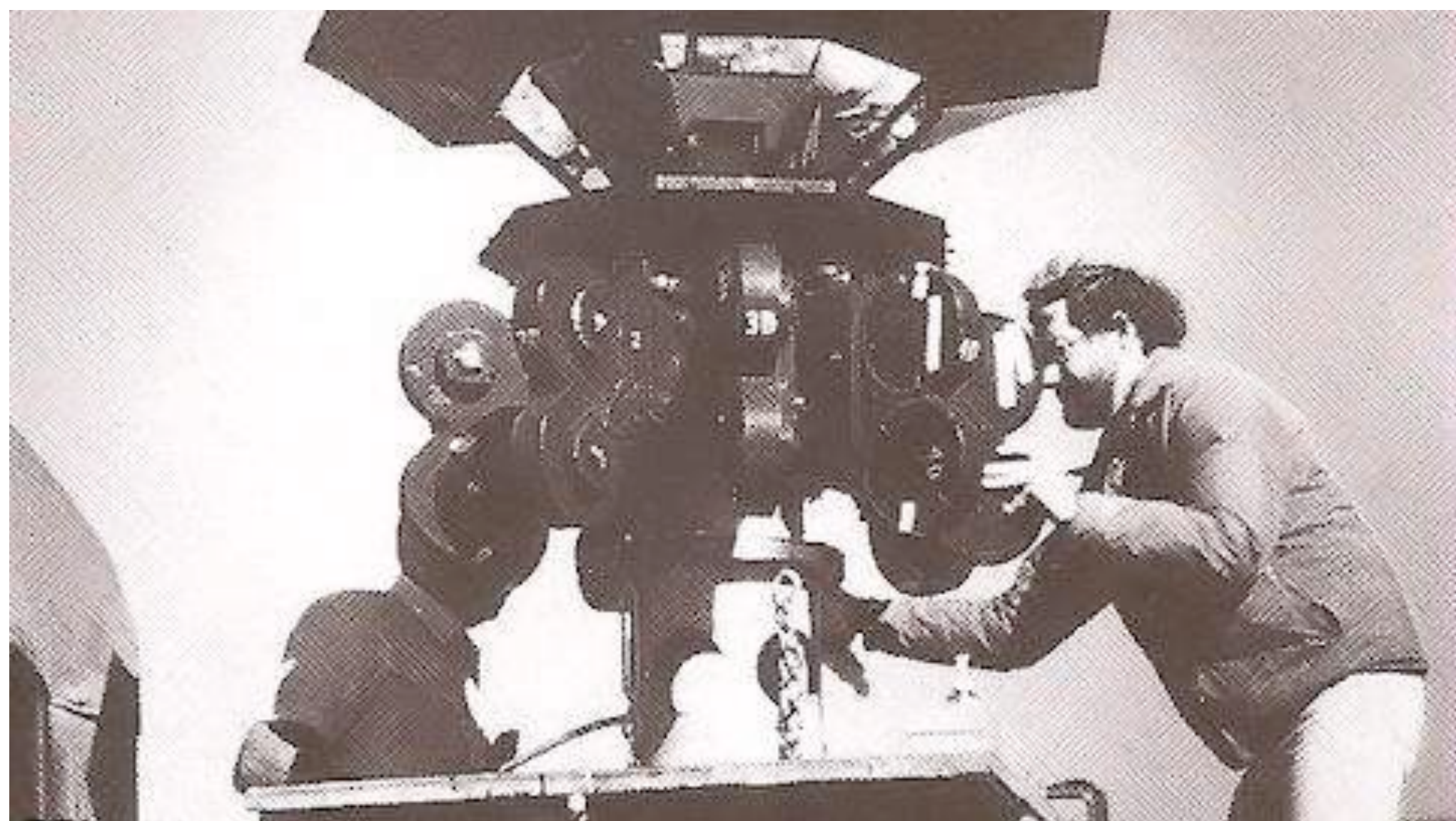
The premiere of the first Cinerama film, *This is Cinerama*, at the Broadway Theater on September 30, 1952.

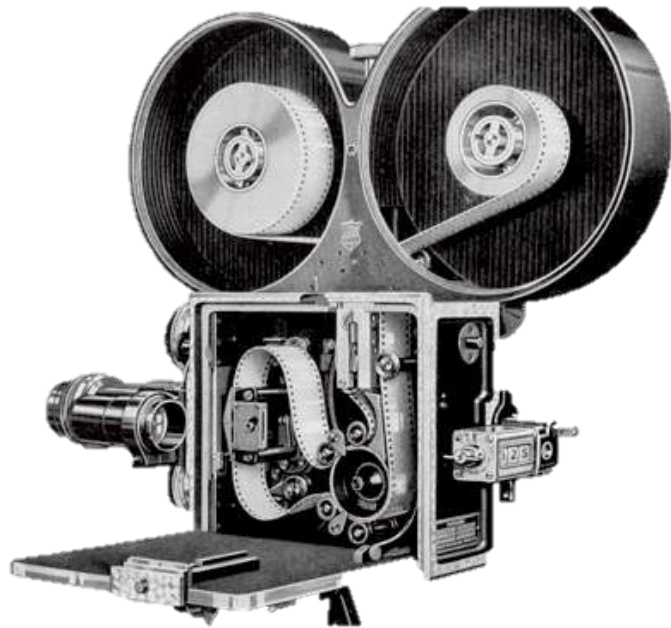






Disney 360 Vision (1955)

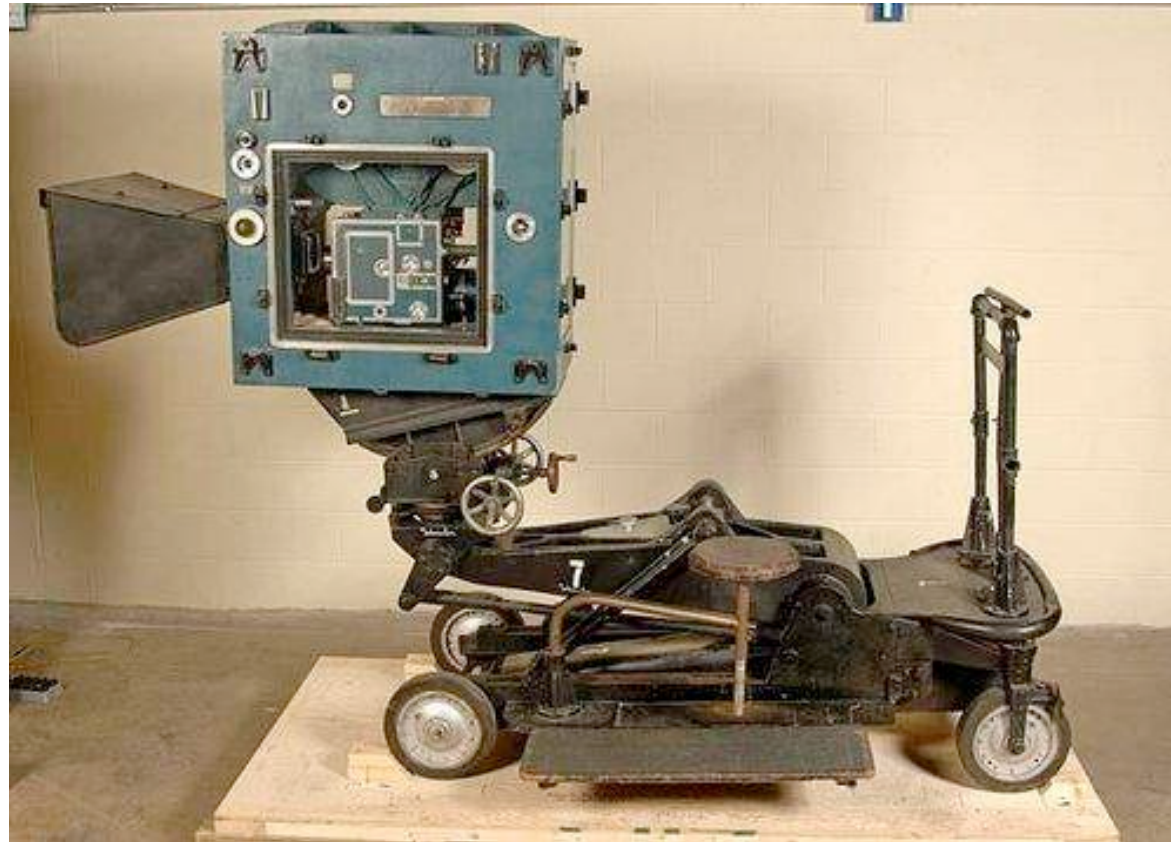




Bell & Howell (1912)

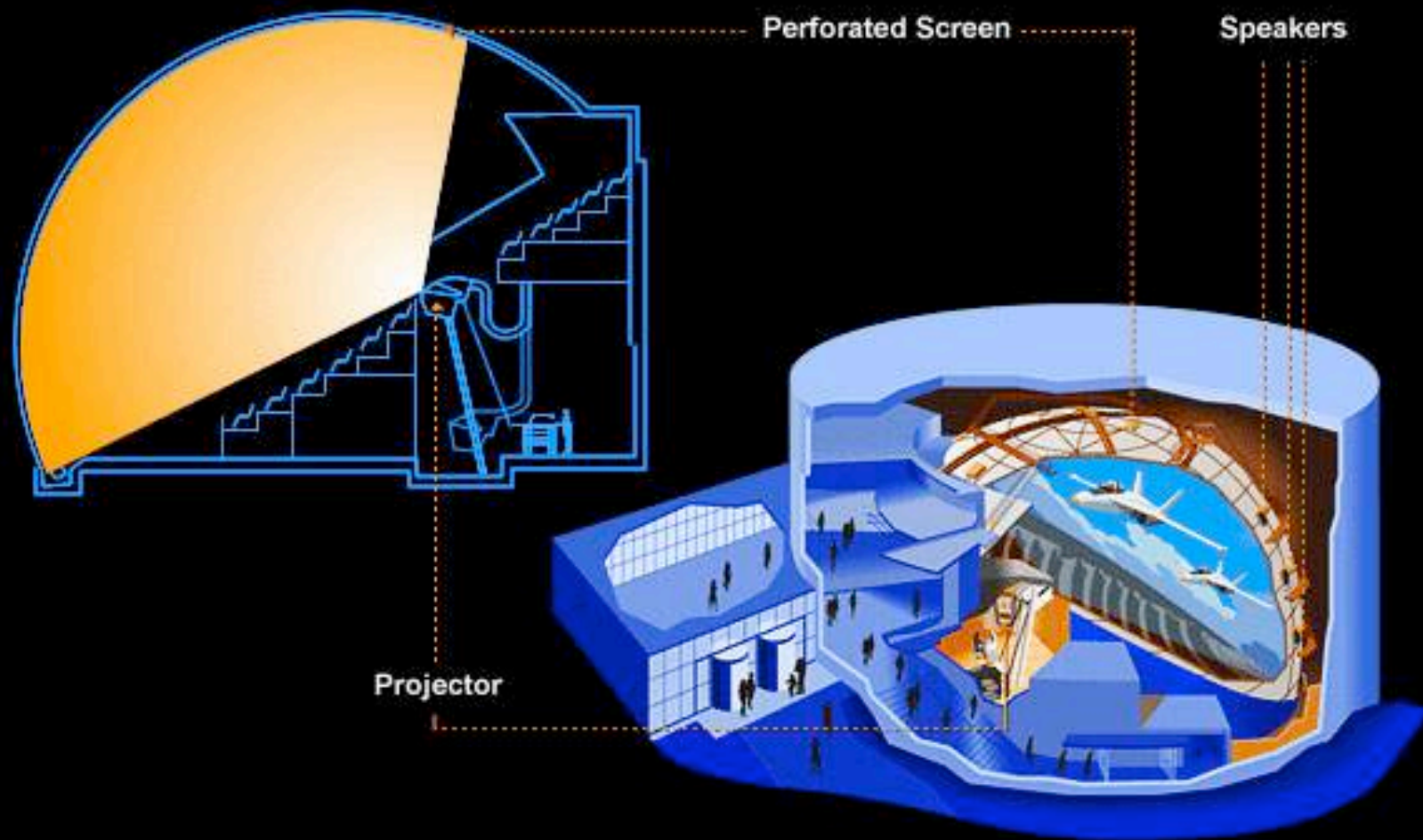


Arri 435 (2004)



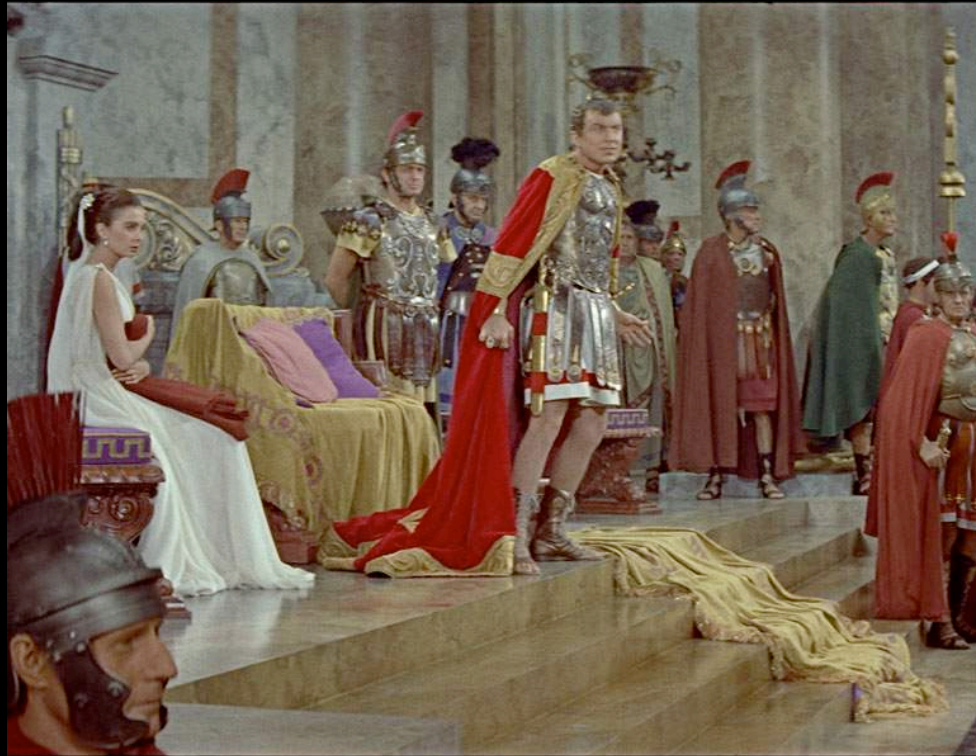
Technicolor Camera, around 1938.

IMAX DOME THEATRE DIAGRAM





Later, Hollywood reversed course and began selling to television, though that meant cropping its wide-screen pictures so they would fit on a small screen.



Later, Hollywood reversed course and began selling to television, though that meant cropping its wide-screen pictures so they would fit on a small screen.



BINGE WATCHING

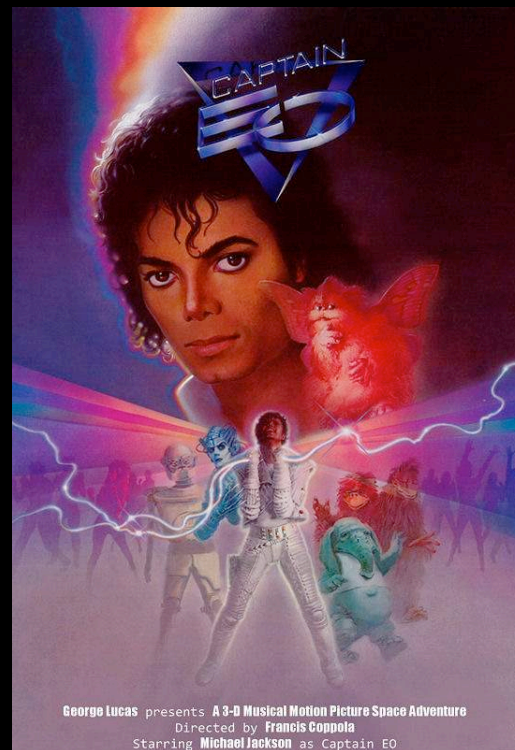
Breaking Bad creator Vince Gilligan:

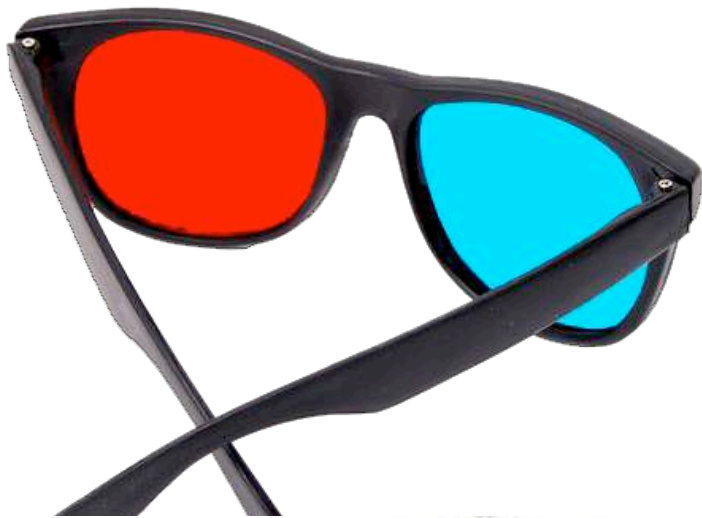
"I am grateful as hell for binge-watching. I am grateful that AMC and Sony took a gamble on us in the first place to put us on the air. But I'm just as grateful for an entirely different company that I have no stake in whatsoever: Netflix. I don't think you'd be sitting here interviewing me if it weren't for Netflix. In its third season, *Breaking Bad* got this amazing nitrous-oxide boost of energy and general public awareness because of Netflix."



STEREOSCOPIC CINEMA

Stereoscopy (3D) has seen continuous interest from the beginning of photography and cinema.

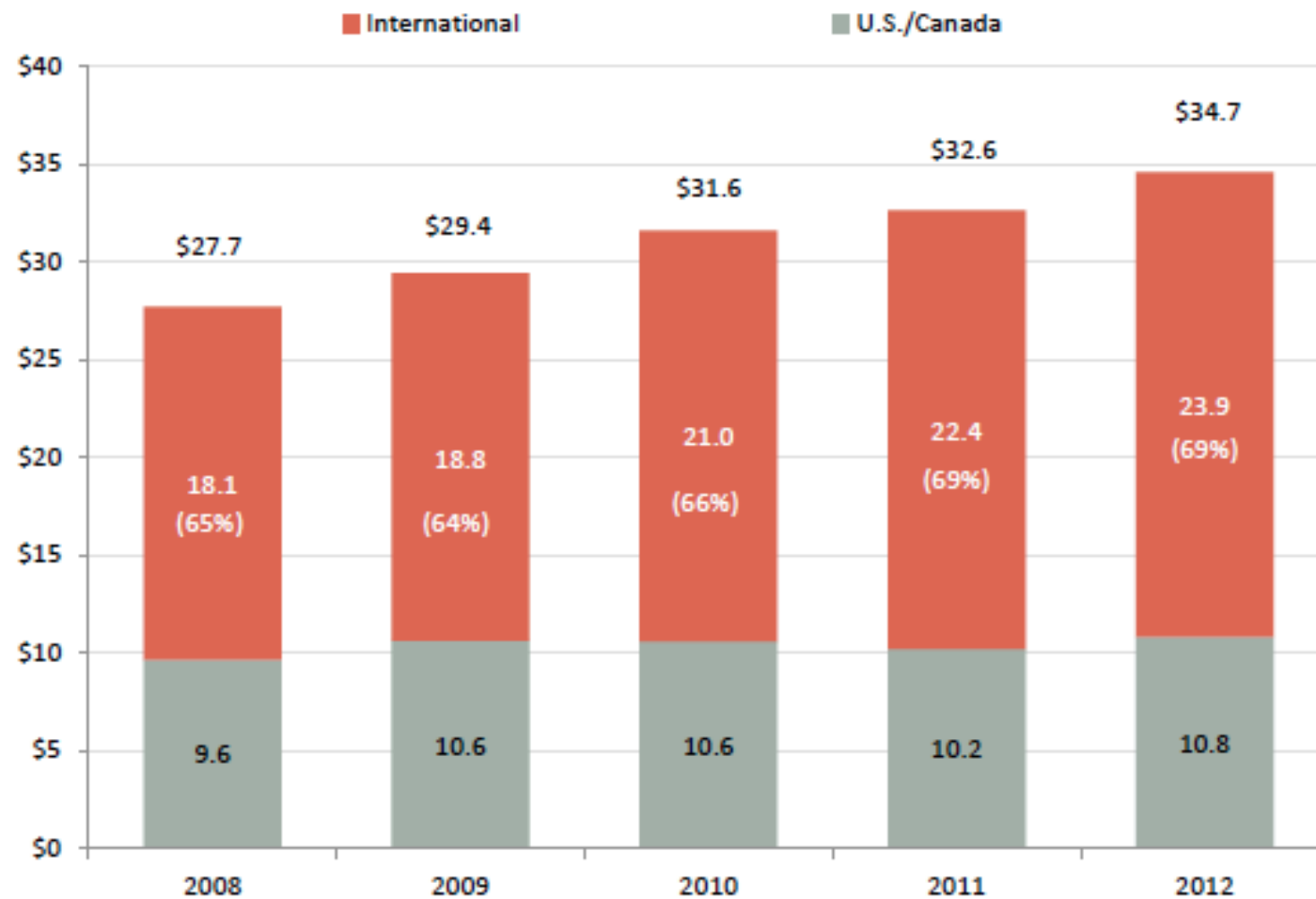








Global Box Office – All Films (US\$ Billions)





INTERACTIVE CINEMA

Kinoautomat (1967) was the world's first interactive movie conceived by Radúz Činčera for the Czechoslovak Pavilion at Expo '67 in Montreal. At nine points during the film the action stops, and a moderator appears on stage to ask the audience to choose between two scenes; following an audience vote, the chosen scene is played.

INTERACTIVE TV

In 1992 Dutch broadcaster VPRO broadcast the TV Movie “Murderous Decisions” on two channels simultaneously – with each channel showing a different, but synchronous perspective in the story.

DVD’s also support some level of ‘interactivity’, non-linear navigation and multi-angle support but other than some multi-cam porn and directors commentary tracks this hasn’t led to a large increase in ‘interactive movies’.

INTERACTIVE MOVIE

Interestingly – although some people anticipated a strong development of cinema in the direction of interactivity, Wikipedia says:

An interactive movie is a video game that features highly cinematic presentation and heavy use of scripting, often through the use of full-motion video of either animated or live-action footage.



VIRTUAL REALITY

When Richard Wagner in 1849 wrote of the theater of the future, he envisioned the spectator "transplanted" upon the stage, "by means of all his visual and aural faculties." In the process, he "forgets the confines of the auditorium, and lives and breathes only in the artwork which seems to him as Life itself, and on the stage which seems the wide expanse of the whole World"

In the 1950's Morton Heilig envisioned a theatre experience that would stimulate all his audiences' senses, drawing them in to the stories more effectively. He built a single user console in 1960 called the **Sensorama** that included a stereoscopic display, fans, odor emitters, stereo speakers and a moving chair. He also invented a head mounted television display designed to let a user watch television in 3-D.

Introducing . . .

sensorama

The Revolutionary Motion Picture System
that takes you into another world
with

- 3-D
- WIDE VISION
- MOTION
- COLOR
- STEREO-SOUND
- AROMAS
- WIND
- VIBRATIONS



○ PATENTED

SENSORAMA, INC., 855 GALLOWAY ST., PACIFIC PALISADES, CALIF. 90272
TEL. (213) 459-2162

Aug. 28, 1962

M. L. HEILIG
SENSORAMA SIMULATOR

3,050,870

Filed Jan. 10, 1961

8 Sheets-Sheet 3

Fig. 5.

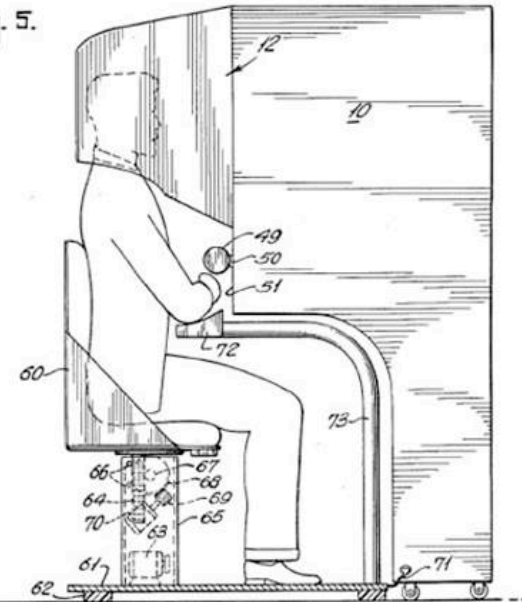
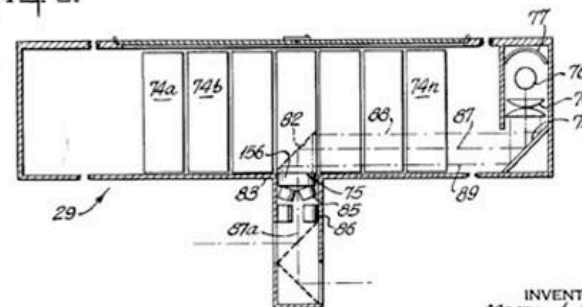


Fig. 6.



INVENTOR
MORTON L. HEILIG
BY
Douglas M. Clarkson
ATTORNEY

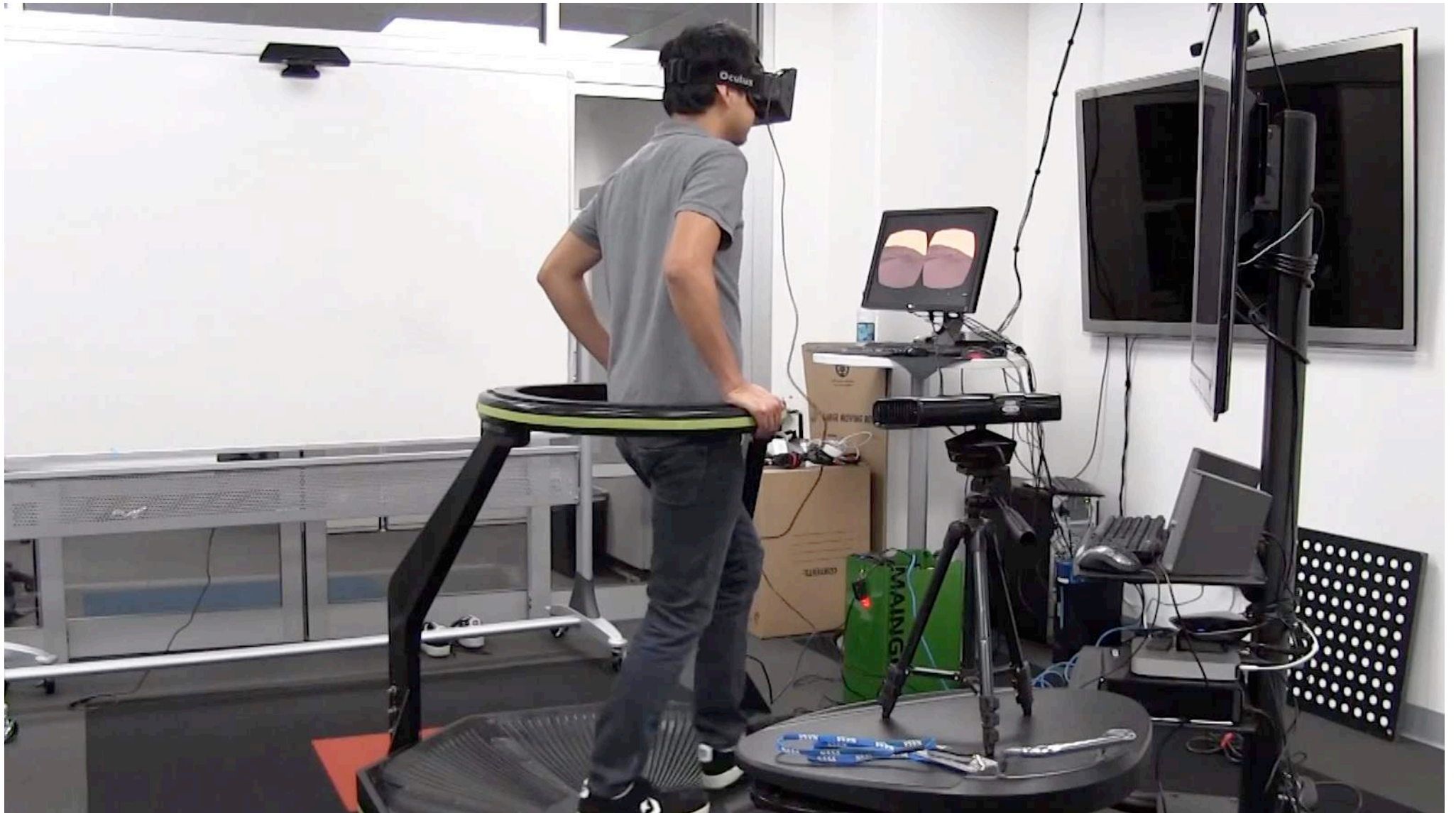


IMMERSION + INTERACTIVITY

With todays technology the ideal of interactive immersive experience is much more within reach.













VR in art context

World Skin (Maurice Benayoun)

<https://www.youtube.com/watch?v=iXL5K1AAa-4>

Run Motherfucker Run (Marnix de Nijs)

<http://vimeo.com/44718902>

Geoffrey Lillemon

<http://www.creativeapplications.net/unity-3d/virtual-reality-art-show-by-geoffrey-lillemon-random-studio>



HOME | **FILM** | SPOTLIGHT

CinemaCon: Barco Unveils 'Wraparound' Screen System

EMAIL

7

PRINT

TALK



MOST POPULAR

1/



TV 7:02PM PT

'Game of Thrones'
Puts Its...

2/





LAR

VIDEOS



Out 4K TV Support, for the
ority that Have It

s UN Troops in Eastern Cities

insas City Shooting Thought to
remacist

ead After Blast Rocks Nigerian

ps Will Compete Once Again

Has Taken Over the
unt



ix Overage Charges for All
ins

nes Close-Up: Ain't No Party
'os Party

ld Not Fire at Reeve!

Would Make The Bible Official

TECH NETFLIX

Netflix Rolls Out 4K TV Support, for the Extreme Minority that Have It

Matt Peckham @mattpeckham | April 8, 2014



The even-less-than-one-percent now have something else to do with Netflix.

Oh 4K TV, you tempt me...actually no, you don't. Who [has \\$2,500](#) — or upwards of \$17,000 for some of these monsters — to spend on *another* new TV nowadays? Didn't we just upgrade from the old ATSC



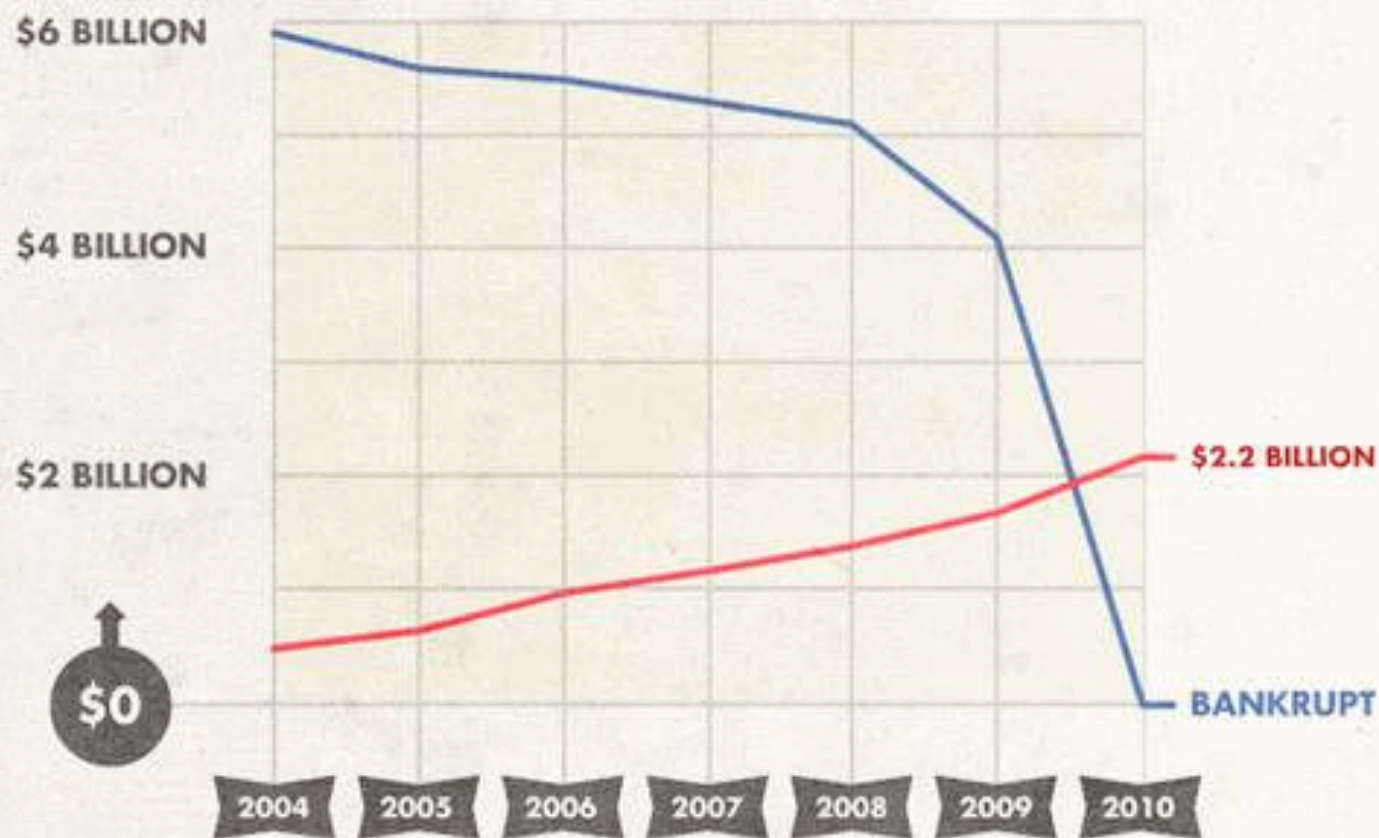
NETFLIX VS. BLOCKBUSTER (2004-2010)



BLOCKBUSTER REVENUE



NETFLIX REVENUE



The 6 Graphs You Need to See to Understand the Economics of Awful Blockbuster Movies

Here's why this and every summer is filled with loud, dumb sequels and reboots.

DEREK THOMPSON | JUL 10 2013, 5:41 PM ET

The Lone Ranger's historic flop this weekend was either entirely shocking (it [really was historic](#)) or entirely predictable ([westerns often disappoint at the box office](#)). But behind every \$225 million bet, you can bet there are reasons. Indeed, the economics of betting a lot of money on a few loud movies a year are tantalizingly clear.

So here, with a little dose of data, is why studios feel encouraged to fill your summer with loud, dumb sequels and reboots.

The globalization of cinema means less explosive dialogue and more explosive everything else.

The future of the movie industry is overseas. Full stop. Between 2009 and 2012, the U.S. and Canadian box office grew by slightly less than two percent. The international box office grew by 27 percent in that time, and it now accounts for

VIDEO



V
S
Q
th

W

Jam

Takeoff and Landin
AF

Meg

This Crazy Purple
Space Agri

Ta-Ne

"the fastest film made between 1902 and 1909 has an ASL of 15.8 seconds while the slowest one made between 2000 and 2006 has an ASL of 10.01 seconds. In other words, the fastest runner in the beginning-of-the-past-century group is 5.7 seconds behind the slowest one of the twenty-first century."

<http://www.cinemetrics.lv/database.php>

Thoughts

Communication / Artistic potential of different screens

Mode of address

Attention span

TV becomes more cinematic (Breaking Bad)

Number of cuts in cinema increases. But TV dares to be slow.

Podcasts > there's very, very little video podcast fiction or art.

Binge watching (> Breaking Bad)

Individualized content